

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Seiji SARAYAMA, et al.

Serial No. : Con't of 09/590,063

Group Art Unit: 2811

Date Filed : Concurrently Herewith

Examiner:

For : PRODUCTION OF A GaN BULK CRYSTAL  
SUBSTRATE AND A SEMICONDUCTOR DEVICE  
FORMED ON A GaN BULK CRYSTAL SUBSTRATE

1185 Avenue of the Americas  
New York, N.Y. 10036

Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
**Mail Stop Divisional Appln.**

**PRELIMINARY AMENDMENT**

Sir:

Prior to examination of the above-identified application, which is a division of application Serial No. 09/590,063, filed June 8, 2000, Applicants respectfully request that the above identified application be amended as follows.

**In the Specification**

Page 32, delete lines 10-26, and replace with --From the x-ray diffraction peak position data, it was confirmed that the cubic GaN bulk crystal 102B thus formed has a cubic lattice constant  $a_0$  of  $4.5063 \pm 0.0009 \text{ \AA}$ . Fig. 19 shows x-ray diffraction intensity data obtained for a GaN bulk crystal grown by the apparatus of Fig. 3 as the bulk crystal 102B at a temperature of  $750^\circ\text{C}$  under the total pressure of 7MPa in the reaction vessel 101. In Fig. 19, it should be noted that the  $F_o$  represents the structural factor obtained from the diffraction intensity data for each of the reflections (h k l) and s represents the error factor of the measurement, while  $F_c$  represents the structural factor calculated from a cubic zinc blende